

Abstract Submitted  
for the DPP10 Meeting of  
The American Physical Society

**Measurement of Spatially Resolved Velocity Distributions in a Dusty Plasma** ROSS FISHER, EDWARD THOMAS, Auburn University — The three dimensional velocity space distribution of charged microparticles in a weakly-coupled (fluid-like) dusty plasma was measured using stereoscopic particle image velocimetry (stereo-PIV). In previous studies a single, spatially averaged, velocity space distribution was obtained over the entire microparticle cloud in the plasma [J. Williams and E. Thomas, *Phys. Plasmas*, 13, 063509 (2006)]. The data analysis techniques have been refined such that spatially resolved measurements of the velocity space distribution can now be obtained. This poster will present measurements from dust clouds with and without the presence of dust density waves.

Ross Fisher  
Auburn University

Date submitted: 14 Jul 2010

Electronic form version 1.4